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MONTANA DEPARTMENT OF JUSTICE

Phase II Best Practices Analysis:

Resource Document for MCJISP Planning

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1 EXECUTIVE SUMMARY

1.1 Introduction

This document is the Phase II report for the Montana Department of Justice (MTDOJ) Local Pilot Project Business Practices Analysis. The project reviewed current issues and activities related to the flow of criminal justice information at the local and state levels, focusing on data that is reported to the state's central repository. This Phase II report is meant to be a complimentary document to the Phase I Report, which contained the findings of the Business Practices Analysis.

Phase II was conducted in the two weeks after delivery of the Phase I report. In addition to the development of high-level technical options for consideration by MTDOJ, two issue discussion meetings were held with MTDOJ staff. During the second meeting, it was determined that the Phase II report would be developed as a planning resource document to support ongoing integration efforts.

1.2 Executive Summary

The identification of issues and problems related to the exchange of criminal justice information was of critical interest to MTDOJ planning staff because this information is needed as the basis of high-level problem definition efforts. In effect, this process is the first step to defining the scope of a needs analysis/feasibility study for technical solutions designed to improve information flow.

For planning purposes, it is worthwhile to reiterate the key findings from the Phase I report:

1. The MANS sheet and fingerprint cards, while not the only documents exchanged between local criminal justice agencies, are nevertheless integral parts of the exchange process. The officials interviewed in both counties were very familiar with the MANS sheet and understood the importance of sending the data to the CJIS central repository.

2. Key records management officials in both counties are making serious efforts to comply with the state's requirements for submissions to the central repository. They expressed a willingness to participate in this analysis in order to improve reporting processes and to make changes to enhance accuracy and timeliness.

3. Local records management systems are not integrated with the process of compiling the criminal history information for the state, nor do these systems support the exchange of this information among local agencies. (Although Lewis & Clark County and the City of Helena have joined to begin implementation of a new public safety and records management system, this effort is not yet integrated with court automation efforts.) Agencies in Glacier County and Cut Bank have older systems that are entirely stand-alone. The County Attorneys currently have no automated systems.

4. As a result of the lack of system integration at both the local and state levels, the exchange of critical criminal history information occurs entirely in paper form. The exception to this is the pilot project now underway at the District Court in Lewis & Clark County for the input of disposition data directly into the central repository.

5. Informal business practices, as opposed to formal business rules, are used to move the MANS sheet and fingerprint cards from one agency to another. Procedures have been developed through the years that incorporate both the instructions from the CJIS Bureau and the particular working relationships between local law enforcement, prosecutors, and the courts. Because of the high level of cooperation among the agencies in these two counties, these informal processes appear to be fairly successful in moving routine information to the appropriate parties.

6. The most significant gaps in the flow of information are caused by:
   - Use of outdated instructions from the CJIS Bureau for the processing of MANS numbers, MANS sheets, and fingerprint cards. An example would be requesting MANS numbers for out-of-jurisdiction arrests using the booking agency's ORI.
   - Lack of understanding on the part of the arresting officer or booking staff about the offenses that are reportable to the CJIS central repository; this is particularly true of less common types of arrests, such as those for Contempt of Court and No Bond warrants.
   - Lack of prosecutor input in the MANS sheet. The County Attorneys do not use the forms and are not very familiar with them; they rely on the courts to handle the MANS sheet, but the courts do not fill in the prosecutor charges portion.
   - Lack of reliable methods to identify individuals that have not been booked prior to court action.

- Lack of reliable methods to report changes to dispositions, such as appeals, deferrals, and post-conviction relief. There is no mechanism in place to trigger the exchange of this information with the CJIS central repository at the same time it is entered into court records.
- Misunderstandings of processing by other agencies; in other words, one agency's staff may think they know what is going on in another agency, but the two agencies are looking at the same information from different perspectives.

7. Time requirements for reporting data to the state are not incorporated into local processing practices; however, the courts that were interviewed are mailing reports to the CJIS central repository on a daily or weekly basis.

Because the Business Practices Analysis was conducted in only two counties during a short timeframe, it is recommended that MTDOJ conduct additional analysis to develop high-level problem definitions that will form the basis of future integration efforts. For purposes of concluding Phase II of this project, however, two general problem areas were identified that reflect the issues identified in Phase I. These problems are:

- Moving MANS data through the Criminal History Cycle
- Improving the flow of information at the local level

Technical options for addressing these problems have been identified and are described in Section 2.4 of this document. These options were developed for discussion purposes and are not intended to be all-inclusive. It has been recommended that MTDOJ continue the problem definition effort within the department and with its CJIS partners. This document is intended to serve as a resource for those discussions and as the basis for further analysis.

2 PLANNING CONSIDERATIONS

2.1 Issues Identified in Phase I

Issue identification during Phase I centered on MANS numbers, arrest and fingerprint data, prosecution data, court data, and (to a lesser degree) corrections data. These issues are described in detail in Sections 3 and 4 of the Phase I report and were used as the bais of discussions with MTDOJ staff during Phase II.

For ease of reference, the high-level issues are summarized below:

Issues Related to MANS Numbers

- Records submitted to the central repository for events that have not been assigned a MANS number.
- MANS numbers without subsequent information in the criminal history cycle.
- Poor linkage between records with MANS numbers in the central repository and records compiled by the Supreme Court Administrator's Office (SCAO) from a local JCMS database.
- Incorrect ORIs applied to an arrest when multiple jurisdictions use the same booking facility.
- County Attorney ORI not identified in multi-county District Courts.

Issues Related to the Receipt of Arrest and Fingerprint Data

- MANS numbers requested and fingerprint cards submitted for non-serious offenses, Federal holds or arrests, prisoner transports, and Contempt of Court arrests related to civil cases.
- Fingerprint cards submitted without associated MANS numbers.
- MANS number requests for Probation and Parole jail sanctions, which are not maintainable.
- Fingerprint cards submitted for identification purposes without being marked as ident-only.
- High-level turnover in jail personnel, leading to a knowledge gap.
- Missing data fields on the fingerprint card.
- Confusion on how to submit additional charges to an arrest.
- Submissions for Conspiracy and Attempt without the original charge listed.
- Listing a modification to a charge as a separate charge.

Issues Related to Prosecutor Data

- Proportion of records received with prosecutor data is estimated at between 1-10%.
- Inability to track the charges through the entire criminal history cycle without the prosecutor data.
- Charges that remain open on criminal history records because the central repository may not have disposition data when a prosecutor declines to file charges.
- Amended charges (such as a misdemeanor amended to a felony charge) may not be forwarded to the central repository until the final disposition is forwarded by the court; this delay can cause a gap in the individual's record that may impact licensing and/or permit eligibility.

Issues Related to Court Data

- Problems linking records in JCMS electronically with the CHRI records.
- Lack of standard practices on handling the submission of final disposition data on appeals.
- Lack of input of sentencing conditions into court systems.
- Missing or confusing records regarding deferred imposition of sentences and deferred prosecutions.
- Lack of follow-up data on dismissals after deferrals.
- Free-form text on MANS sheets that is inconsistent with other data on the form; free-text descriptions for a disposition can differ from court to court or within a court.
- Lack of information on the movement of a case from one court to another.
- Mismatches between the literal description of a statute and the statutory reference listed.
- Cases split between justice and district court resulting in confusion about whether the arrest cycle is still open or should be closed.
- Post-conviction relief information not forwarded to the central repository to update the court disposition.

Issues Related to Corrections Data

- No set procedure or business rule at the department level for how arrests related to probation violations and jail sanctions are to be handled with respect to information due to the central repository.

- Problems linking the corrections segment with a specific arrest and disposition, possibly due to inconsistency in the presentation of the court docket number.

2.2 Gaps in Data Exchange

The findings of the interviews conducted in Phase I were used to identify gaps and inconsistencies in the exchange of criminal justice information. This information is detailed in Sections 4.4 and 4.5 of the Phase I report, and it is also reflected in the Strengths, Weaknesses and Opportunities section of this document (see Section 2.3). General observations based on these findings are summarized below for ease of reference:

- Despite good working relationships among the various agencies involved in the interviews, the understanding that one agencies has of another's processes and procedures can be incorrect or outdated. It is not uncommon for agencies to use slightly different terms for data or events, causing confusion on what data is actually required and increasing the potential for gaps in processing.

- Based on observations during the Phase I analysis, the business practices governing the creation and transfer of data at the local level appear to be guided not by established business rules but by more informal, generally accepted procedures that have been developed through the years.

- Training and retraining efforts can have a positive effect on local agencies, but staffing limitations act as a constraint on the ability to do regular training. Information gleamed from the interviews indicates that some procedures used at the local level reflect outdated instructions from earlier training sessions.

- According to the CJIS Bureau, the capability and willingness to submit required data to the central repository varies statewide. This could be a result of staffing limitations (understaffing, poor training, or high turnover) at the local level, but it could also be caused by a misunderstanding the state's requirements and needs.

- The type of automated systems and system functionality varies significantly from agency to agency.

- Because of the lack of integrated or electronic systems, the exchange of critical criminal history information occurs entirely in paper form.
- The prosecutor data portion of the criminal history cycle is rarely reported to the state.
- There is no statewide system for prosecutors and there are currently no plans for a unified system.
- The courts have increasingly taken on the task of linking MANS numbers with court docket numbers but this is done as a manual check and is not automatic.
- The critical links between the arrest and the disposition are the MANS number and the court docket number. Formatting differences used by individual courts can lead to linkage problems. In addition, documents frequently received by the CJIS bureau do not always include these links. In these cases, linkage requires research by CJIS Bureau staff.
- The court systems are state-mandated and are not integrated with local systems.
- Time requirements for submissions to the state are not formally incorporated into these procedures.
- There do not appear to be any time requirements for the exchange of data between agencies at the local level.
- Specific business rules do not exist at the state level in the Department of Corrections for processing criminal history data related to probation violation cases.

2.3 Strengths, Weaknesses, and Opportunities

The issues and problems identified in Phase I were distilled down to a list of critical factors representing strengths, weakness, and opportunities in the exchange of criminal justice data. This information was used in discussion meetings with MTDOJ and is intended to form the basis of further discussion and analysis.

2.3.1 Strengths

1. Some of the larger jurisdictions in the state have integrated public safety/records management programs in place or in planning stages; some of the County Attorneys are also implementing new Records Management Systems
2. The implementation of new court software at Courts of Limited Jurisdiction is underway
3. MANS Numbers and MANS sheets are well integrated into processing of CHR at the local level
4. Nearly two-thirds of the MANS and fingerprint submissions come from only 15 jurisdictions
5. In the counties surveyed in this analysis, there is substantial willingness to work with the state to improve the quality of criminal history data
6. Training efforts by the CJIS Bureau can have a positive impact on the quality and timeliness of data submitted to the state

2.3.2 Weaknesses

1. There is no statewide inventory of current systems and IT environments
2. Local integration efforts do not incorporate corresponding state systems, such as the systems administered by the Supreme Court Administrator's Office for local courts
3. Smaller jurisdictions do not have access to resources to improve communication, data systems and intra-agency integration efforts
4. There are no plans for a unified, statewide prosecutor system and very little data is provided by prosecutors on the MANS sheets
5. The links between CHRS and JCMS have not been very successful to date, although the electronic transfer of data was successful
6. There are no shared standards on a statewide basis for criminal justice terminology (such as events and statute "literals") and for common data needs, leading to misunderstandings and inconsistency in the treatment of data
7. Criminal history data is shared primarily in paper form among local agencies and the state
8. Business practices directing the exchange of criminal history information are informal and the interpretation of existing processes varies from agency to agency

9. The key data sets/data elements that are not always received by the repository include:
   - Prosecutor Charges
   - Changes to judgments (deferrals, post-conviction relief)
   - Appeals
   - Corrections to MANS requests that were in error (non-maintainable)
   - Dispositions for cases split between two courts

2.3.3 Opportunities

1. The new MCJISP Planning Committee offers a platform for the development of policies and priorities for integration efforts
2. Integration efforts such as the one currently underway in Lewis & Clark County and the City of Helena are excellent opportunities to develop a model for improving data exchange points, as well as an opportunity to develop shared business rules for data exchanges
3. If staff time becomes available, there are several steps that could be taken to improve data collection in the near term; these steps include updating the CJIS Bureau's training instructions
4. CJIS staff time is taken up with data entry chores that will decrease substantially when the NEC TC has been successfully installed.
5. The initial positive results of the CJIN M*ECourt screens installed in Lewis & Clark County provide a test case for evaluation of this option or some variation
6. IT advancements in the MTDOJ and its CJIS partners offer an opportunity for creative solutions

2.4 Refinements of SEARCH Exchange Research Model

2.4.1 Update

MTDOJ requested that a research approach currently under development by SEARCH be used for the Business Practices Analysis. When the analysis began, a report published by SEARCH in 2000 was used as the basis for the development of "view tables" illustrating exchange points. SEARCH has continued the development of the Data Exchange Points model during the time the MTDOJ BPA was conducted. According to SEARCH staff member David Usury, a new web page has been created (www.infoexchange.search.org) which provides updates to the development process and the pilot project currently underway

in five states. The web page also contains the latest draft report entitled *Detailed Methodology Underlying the Justice Exchange Model (JEM)* and a procedures manual for the software developed for the model. The JEM software is currently available only in the pilot states.

There are three key changes in these latest developments of the SEARCH research that affect the MTDOJ BPA View Tables, which were based on the preliminary report released in 2000. The first is the addition of a new exchange point dimension for "state." This dimension (or key component of information exchange) depicts the phase of a case in which the exchange is occurring and allows for better representation of the business process or context in which the exchange of data is occurring. This is important because if a single dimension changes, the nature of the overall data exchange can change as well. Second, Information-Centric View Table that was used in the BPA has been split into two tables: the Data Set-Centric View and the Documents-Centric View. Third, SEARCH has begun to define standard terms to be used to describe the various dimensions and their contents (such as data sets, data elements, events); the lack of standard terms and a common understanding of these terms was determined to be a restrictive factor in the preparation of the Montana view tables.

2.4.2 Findings from Existing CJIS Documents and State Pilot Projects

Excerpts from the draft *Detailed Methodology* report provide a summary of some of the recent findings and developments that are particularly relevant to the BPA project; this information can be found in Appendix A. Extensive quotes have been included in this report because of the applicability of this new information from SEARCH; however, it is suggested that MTDOJ review the entire SEARCH report for additional information. The information on the web page was last updated on Nov. 8, 2001, and the excerpts are from the report version of that date.

2.5 Technical Options Identified

This section describes technical options that were developed to address the problems identified in Phase I of the Business Practices Analysis. These options are high-level, strategic solutions that reflect proven technical approaches; specific examples of technical solutions are included in Appendix A, along with costs if known.

The objective of providing these options is to provide a starting point for additional discussion and to provide a basis for MTDOJ and its CJIS partners to further develop technical responses to the issues identified in the Business Practices Analysis. As such, this list of technical options is not intended to be a final list of options nor is it intended to be an in-depth evaluation of the options listed. It is possible, for example, for some of the options to be combined or concurrent.

In developing these options, the high-level issues identified in Phase I were used as the basis for defining two major problem areas: first, moving MANS data through the Criminal History Cycle; and second, improving the flow of criminal justice information at the local level.

2.5.1 Problem 1: Moving MANS Data through the Criminal History Cycle

Option 1: Expand the use of CJIN M*ECourt Screens in local courts and M*EProsecutor screens in prosecutors' offices.

- Advantages:
  - CJIN Terminals are available to all jurisdictions; Linxx 2010 is a proven application already in place in limited locations
  - Input is made directly into CHRS by originating agency
  - Could allow entry of prosecutor data if County Attorney has Internet access
  - Allows view of CHR as well as input to CHR (note: Courts may not want CHR data access)
- Challenges:
  - CJIN terminal costs may be excessive for this type of use
  - Internet access by local agencies is required for Linxx 2010
  - Screens are not integrated with local RMS systems
  - Double entry of data is required
  - A "trigger" is needed to remind local agencies to use the screen
- Background Information: See Appendix B for CJIN M*ECourt Screens

Option 2: Complete the development of direct file exchange with JCMS system.

- Advantages:

- Disposition data is a critical element in the Criminal History Cycle and, as such, should be a major focus of any integration efforts
- IT staff at MTDOJ and SCAO have experience in interfacing CHRI with JCMS data
- New software for the Courts of Limited Jurisdiction is in the process of being installed and it offers new opportunities for linking modern databases

- Challenges:
  - The focus on disposition information as contained in the JCMS databases does not address issues identified outside the court system, issues that affect the exchange of data
  - Older systems may eventually be replaced, requiring new file transfer developments
  - Efforts to create a successful interface with the Court's system may work best for integration purposes as part of a larger integration effort described in Option 3, below.

Option 3: Create a data warehouse and data exchange utility through the installation of middleware at the state level.

- Advantages:
  - Repositories exist at the state level for CHRS, Corrections and District Courts
  - CJIS Management Working Group is an established body that could be used to support warehousing efforts
  - Data from disparate systems can be transferred automatically on a real-time basis
  - Data could be queried and viewed from the warehouse
- Challenges:
  - Linkage problems have not been solved to allow satisfactory sharing of information between the existing District Court databases
  - A central repository for Courts of Limited Jurisdiction has not been created yet
  - No repository exists for prosecutor data
  - No legislative mandate exists for state warehouse
  - Batch file transfers from a variety of local RMS may pose technical and staffing problems
  - Business rules for sharing of information and data specifications would have to be developed
  - Overall status of repository development may delay implementation of this option indefinitely
- Example/Background:

- Colorado Integrated CJIS Project (See Appendix B)

Option 4: Create a web-based middleware application with referral, interfacing, indexing and warehousing capability.

- Advantages:
  - Available to any agency with Internet access
  - Provides an electronic version of the MANS sheet
  - Allows different users to access and update the data throughout the arrest cycle
  - Allows the transfer of MANS data among various agencies with different and disparate records management systems
  - Functionality could be created to automate the exchange of data, allowing both automatic and ad hoc referrals of MANS-related data
  - Data could be queried and viewed from the index and/or warehouse
  - Development could take advantage of existing infrastructure and programs, as well as staff knowledg, within MTDOJ
  - System can be interfaced with current systems or can act as a stand-alone function to provide for the storage and transfer of MANS data
- Challenges:
  - Resources may not be available to develop interfaces with all local systems currently in use
  - Double entry of MANS data will be required when users do not have access to an interface
  - Internet access by local agencies is required
  - Business rules for sharing of information and data specifications would have to be developed
  - A "trigger" must be developed to remind local agencies to input data if an interface has not been created for that agency's specific records management system
- Examples/Background:
  - Sharing of Public Health Information (SOPHI) Web Application (Montana Department of Public Health and Human Services) (See Appendix B)
  - Wisconsin's Prosecutor System and Integration Efforts (See Appendix B)

2.5.2 Problem 2: Improving Flow of Information at the Local Level

Option 1: Provide an integrated system for local law enforcement and prosecuting agencies that will cover all functions from arrest through disposition and will integrate with the state-mandated court systems

- Advantages:
  - Allows smooth transfer of information from arrest through disposition, minimizing or eliminating double entry of key criminal history information for all criminal justice agencies at the local level
  - Allows transfer and access to information which is of interest to local agencies and is not limited to criminal history data (that is, the advantages are far in excess of the transfer of criminal history data for repository purposes)
  - Eliminates gaps in information
  - Can be interfaced with MANS data sharing systems
  - Can be interfaced with state repository for direct file transfer of criminal history data
  - Implementation of an integrated system for local use can maximize the effectiveness of limited IT staff in each local agency
  - Various vendors offer existing products or transfer solutions
- Obstacles/Challenges:
  - Several large jurisdictions have installed RMS systems in recent years or are in the process of implementation; smaller jurisdictions have a variety of different systems in place including a NIBRS-compatible program distributed by the Board of Crime Control
  - Must be interfaced with SCAO-mandated systems
  - Funding has not been identified

3 RECOMMENDATIONS

3.1 Recommendations for MTDOJ Consideration

Administrative recommendations contained in the Phase I report were not changed as a result of meetings with MTDOJ staff during Phase II. These recommendations are summarized below:

- The CJIN access recently installed at the District Court will provide disposition data more rapidly and in an accurate form through the use of the M*ECourt Screens. This project should be monitored carefully to determine the impact of using this input method on both court procedures and on the compilation of criminal history data.

- The CJIS Bureau should consider reviewing procedures with the goal of streamlining and clarifying state requirements for MANS numbers and MANS sheets.

- The CJIS Bureau has developed audit tools that can be used to identify problems in specific locations by combining site-specific audit findings with activity summaries. Expanded use of these tools is recommended.

- An analysis of reports from the Criminal History Records System can provide additional information for targeting bureau activities according to the impact on the bureau's workload.

- The Bureau should consider making to live scan transmission quality reports more available to a wider group of local agencies since these reports have been used by some agencies to evaluate quality and operation issues, as well as other reports that have been requested by local agencies.

- The CJIS Bureau may want to consider reviewing the legal basis for maintaining certain Title 45 and Title 46 offenses, particularly:

    - 46-6-212 Failure to Appear Following Summons or NTA
    - 46-6-503 Violation of Release Conditions – Forfeiture
    - 46-9-505 Issuance of Arrest Warrant (literal definition of Bail/Bond revocation)
    - 46-18-203 Revocation of Suspended or Deferred Sentence

- 46-23-1012 Probation Violation
- Restitution Orders and No Bond Warrants

Additional administrative tasks are time-consuming but could have an immediate impact on the accuracy of data before longer-term solutions are implemented:

- Revise the Administrative Rules (dated 7/01/93) to reflect current law. An example of the outdated material included in these rules is the requirement that MANS numbers be issued for all custodial or felony arrests.
- Revise the Criminal History Record Program (CHRP) Manual to reflect current law and current practices; the last publication date was 7/01/93. This should include standards such as descriptions for charges ("literals").
- Revise the MANS sheet to reflect current requirements and to highlight information that is often missing, and clarify when and how dispositions should be reported to the central repository when a case is being appealed.
- Review ORI assignments to determine if additional assignments should be made.
- Develop summary handouts ("tips") for obtaining MANS numbers and completing MANS sheets; these handouts could be posted at booking areas and other central locations to assist local staff at the time of booking or when the MANS sheet is filled out.

3.2 Recommended Next Steps

In the context of statewide CJIS initiatives, the following steps are recommended for further planning and analysis by MTDOJ and its CJIS planning partners.

1. Data Standards and Best Practices: To enhance the goals of integration, the state should consider developing standards for the type and exchange of criminal history data. Some of the local agencies are moving forward with locally integrated systems, and it would be desirable to incorporate statewide standards into these new systems as soon as possible. Data specifications are critical for purposes of successfully exchanging information among all agencies but are particularly important for interfacing with the courts so that arrest and disposition linkage can be improved. Finally, because of the informal nature of current business practices guiding the

exchange of data, the development of "best practices" for the exchange among local agencies and to the state is also a critical part of the integration effort.

For planning purposes, a high-level process flow of the movement of MANS sheets has been developed to show the current exchange of MANS data from the local level to the state repository. This process flow is included in Appendix C.

2. Needs Analysis/Feasibility Study: The review of business practices related to data exchange in two counties provided some insights into the types and causes of problems that lead to gaps and inconsistencies in criminal history data. The timeframe available for the analysis did not allow for more thorough and comprehensive review on a statewide basis. MTDOJ may want to consider a Needs Analysis/Feasibility study to fully explore issues and requirements for data exchange in preparation for the development of a preferred technical solution and related CJIS policies and procedures.

3. Refinement of View Tables: Since the time that the data exchange view tables were created for Phase I of the Business Practices Analysis, new information has been obtained regarding the continued development of the SEARCH research model for data exchange points. The dimensions of data exchanges used in the tables and the structure of views used to illustrate exchange points have both continued to evolve. As the SEARCH model becomes more refined, MTDOJ may wish to follow up on the work contained in the Phase I document to support a more detailed analysis of data exchanges in Montana.

4 APPENDIX A: SEARCH DETAILED METHODOLOGY REPORT; EXCERPTS OF KEY FINDINGS

Update on SEARCH Justice Exchange Model

The following are excerpts from the draft SEARCH report titled *Detailed Methodology Underlying the Justice Exchange Model.* The information contained on the project web page (www.infoexchange.search.org) was last updated on Nov. 8, 2001, and the excerpts are from the report version of that date.

General Findings

- "There was diversity surrounding the concepts or models of information exchange. The method for representing a criminal justice information exchange point (transfer) varied from jurisdiction to jurisdiction. Each jurisdiction emphasized one point of view or aspect of the exchange." (page 1)
- "Data flow diagrams or views do not take into account the *circumstances* that give rise to the flow of information….The models do offer the ability to decompose complex systems and offer flexibility in the use of the methods (i.e., how organizations, processes, and entities are related to each other). The decomposition, however, makes it difficult to see the whole exchange process (i.e., event control), and the flexibility makes it very difficult to compare exchanges, as structure is almost undefined." (page 2)
- "Additionally, not all jurisdictions discussed data at the same level. Information was identified at the data elements level, groupings of data (which are data elements that naturally flow together) and/or documents. For instance, within a given jurisdiction, one transfer would state that an SID Number (State Identification Number) was transferred on a given exchange of information. While in another exchange, 'court case identifiers' were transferred from one agency to another. On yet another exchange, an Arrest Report was sent between two criminal justice agencies. Since an SID Number, Court Case Identifiers, and an Arrest Report all describe different layers of data, it was determined that it would be necessary to separate **Data Element**s, such as SID Numbers, from groupings of data elements or **Data Set**s, such as Court Case Identifiers, and **Document**s, such as Arrest Reports. Information was separated into these three distinct classes in order to better present the relationship between each of these levels of information and allow for comparisons." (page 3)
- "Many jurisdictions did not overtly make mention of a significant aspect of information exchange, which is the identification of **Conditions** that exist within an event and control the process sequence of information through the criminal justice process. Several jurisdictions did allude to conditions by embedding them in narrative text (or as decision points in a flowchart). For instance, they would include language such as, 'if subject has an outstanding warrant when he/she returns to court, then the court will inform law enforcement of the need to recall the warrant.'" (page 3)

Development of the Justice Exchange Model (JEM)

- "If information exchange, in the justice environment, consisted of only two components, such as agencies and information, two-dimensional models based on Newtonian physics would suffice. If the full path of information were obvious from

the start of the justice process, traditional diagrams would apply. Unfortunately, the probable paths throughout the justice system are enormous. It is as if there are two layers of the criminal justice process. The first is a linear view of a forward moving flow, from incident and arrest through prosecution, trial and verdict. Then there is the actual instance of any one person moving through the justice system. A person can enter and exit the justice system in many places (agencies and/or events) and be in multiple stages at any given time (on supervision and under investigation). It is impossible to determine where a person or case will progress beyond the next step. If you looked at all the possible scenarios it would look more like a spider's web than an orderly flowchart." (page 5)

- "Dimensions represent the key components, or classes, of an information exchange. The **five dimensions of information exchange** are best represented by these definitions: **States** (phases of the case), **Events** (trigger points for data exchange), **Agencies** (senders or receivers of criminal justice information), **Conditions** (factors surrounding data transfers that control the flow of information), and **Information (Document**s, **Data Sets** and **Data Elements** transferred throughout the criminal justice system)." (page 6)
- "In the justice exchange model, the classes have pre-existing relationships into which the objects fit." (page 7)
- "Once the dimensions were identified, it became possible to develop a standard collection tool to serve as a meta-data collection method." (page 8)
- "In order to facilitate identification of the common components of exchange points a common language would have to be adopted. UML [Unified Modeling Language] was the immediate candidate because it deals with modeling complex systems. The human mind has the ability to simultaneously comprehend about seven pieces of information. In keeping with this limitation, a model permits multiple levels of abstraction and the ability to view a system from multiple perspectives. Through use of a model, one is able to document both business (process flow) knowledge and system requirements." (page 8)
- "A meta-data collection and reporting tool was required in order to support the conceptual framework. Its primary benefit stems from the fact that it goes beyond computerizing various diagrams. Rather, it provides an intuitive means for generating UML-like output (diagrams and reports). Once the dimensions of information exchange are entered, the tool uses situational queries to determine downstream effects and collaborations. For example, it states, "within a given agency, when a specific state and event occur, under certain conditions, distinct data should be sent to designated downstream agencies." Additionally, the tool identifies the states and events that are initiated as a result of the current data exchange. The output of this data entry process correlates to specific views similar to UML diagrams." (page 9)
- "The collection method and methodology is referred to as the Justice Exchange Model (JEM). The JEM is designed around each of the five dimensions as independent "classes" having relationships to one another." (page 9)
- "The transfer or exchange itself was a whole created through building the unique relationships of the five dimensions. If a single dimension was changed, the nature of that particular exchange changed, and it was no longer the same exchange (e.g., if the

receiving agency changed, or if the documents sent changed). The information exchange was "greater than the sum of its parts." Looking at the exchange as a whole provides contextual meaning for each of the dimensions, which were not meaningful individually. In other words, it was the combination of these dimensions into criminal justice exchanges that provided context and understanding of information exchange points." (page 10; emphasis added)

- "The use of JEM to collect meta-data allowed multiple views of exchanges from the same conceptual framework. Reports and diagrams can be developed grouping exchanges by any one dimension. Exchanges can be viewed by agency, event, state or data. This can be done in textual or graphical representations of exchanges. The relational representation of the dimensions with specific rules for their content and relationship allows for the meta-data to be reviewed for consistency and patterns. Data can become a central focus for analysis without being the center of the conceptual framework. The ability to see how a document, data set or data element moves through the criminal justice process, when it moves, and the agencies involved in the transfer is a by-product of the exchange centric model." (page 11)
- "JEM provides the ability to produce diagrams and reports that view data from different perspectives. One may view exchanges that occur during a particular state (State-Centric Report), event (Event-Centric Report), between specific criminal justice agencies (Agency-Centric Report), involving the transfer of specific data sets (Data Set-Centric Report), or involving the transfer of particular documents (Document-Centric Report)." (page 11)
- "The Justice Exchange Model is now written in Java and is available to designated users via the Internet." (page 11)
- "Two sites may have referred to the same general event or document, but each may have used a slightly different name as part of the reference. Therefore, it was necessary to standardize the names/text for each of the five dimensions of information exchange. In many instances, the final event, data set, data element, document, and condition descriptions do not reflect a given entry in any single jurisdiction, but represent the most appropriate compromise between the dissimilar naming conventions used in each of the five sites." (page 16; emphasis added)
- "Once the standardized dimension definitions were developed and the site data was consistent with the definitions, comparison of the five sites' data became feasible. Through the analysis of the five sites' models, new event names took shape, new data sets were created, and a list of commonly used conditions was developed. These lists are represented in subsequent sections of this document." (page 16)

5 APPENDIX B: BACKGROUND ON TECHNICAL OPTIONS AND RECENT INTEGRATION EFFORTS

CJIN M*ECourt Screens

Advantages and Opportunities

- All jurisdictions in the state have access to CJIN terminals, either through dispatch or booking units operated by that jurisdiction or through a shared arrangement. The alternative access to CJIN terminals on the DOJ LAN is currently through CyberLynxx or Linxx 2010.
- The M*ECourt screens offer the following advantages over the current process using paper MANS forms:
  - The screens do not require installation of a CJIN terminal by providing access through the Internet.
  - Local criminal justice agencies can use the screens to input directly into CHRS, eliminating the need for data entry by CJIS Bureau staff or file transfers.
  - Entries are made by the originating agency, avoiding any misinterpretation of written submission by CJIS Bureau staff. Errors in entry can be caught by the court staff and corrected using the original sources of information.
  - If Internet access is available to prosecutors, the corresponding prosecutor screens could be used for input of prosecutor data even if that agency does not have its own records management system.

Disadvantages and Challenges

- Using existing CJIN terminals for entry of disposition data is not practical in most cases because dispatch or booking units are not likely to have sufficient staff resources for this purpose.
- Although CyberLynxx or Linxx 2010 offer solutions to the problem of using a standard CJIN terminal, not all courts or prosecutors have Internet access.
- The M*ECourt screens are not integrated with other court or prosecutor systems, resulting in double entry of the data.
- No determination has been made on who will bear the cost of installation and any annual charges and/or licensing fees.
- Before moving to wider use of M*ECourt screens, the CJIS Bureau could consider revising the screens to reflect current needs and to clearly accept updates such as appeals and post-conviction relief.
- Given the disadvantages of double entry, the M*ECourt screens should probably be viewed as a temporary fix until statewide integration efforts are successful.

Costs

- The cost for the Linxx 2010 web application is the most reasonable of the CJIN-related options.
- Linxx 2010 costs to the user are $1,500 for the license fee plus a 15% maintenance fee.

Colorado Integrated CJIS Project (CICJIS)

(Source: Case Study Series: A Report on the National Task Force on Court Automation and Integration, Fall 2000/Winter 2001)

System Description

- CICJIS utilizes middleware technology to integrate legacy information systems of the following state justice agencies: Judicial Branch; Bureau of Investigation; Department of Humans Services Division of Youth Corrections; District Attorneys Council; Department of Corrections.
- Information collected by any agency is automatically routed to the other agencies according to pre-established business rules using a private TCP/IP network. Data exchange is on a real-time basis.
- The CICJIS central index stores information on offenders and cases.
- Middleware vendor was Sybase.
- Central servers consist of: HP 9000 UNIX, OmniCONNECT, Informix Access Modules, and HP 9000 UNIX central Index using SQL.

System Scope

- CICJIS is limited to felony cases in State-funded courts, excluding misdemeanors and the Denver County Court.
- CICJIS is limited to state-level legacy systems.
- Expansion plans for additional courts, local law enforcement systems, and public access are under study.

Linkage

- Person matches are made by SID.
- Case matches are accomplished through matches of court case numbers or through a combination of arrest number, arrest date, and arresting agency.

Statutory Basis

- CICJIS was mandated by legislation passed by in 1996.
- The legislation also created a CICJIS Task Force to design, develop, and implement the system.

Cost

- Implementation cost was $4 million

For additional information, see Sybase web page: http://my.sybase.com/detail?id=1002260

Sharing of Public Health Information (SOPHI)

Summary

- SOPHI is a web-based middleware application created for the Montana Department of Public Health and Human Services to facilitate client intake for local public health services, referral of clients among local and state agencies, and interfacing of disparate systems.
- The application is a secure web-based program that requires users to have Internet access and does not have to be installed on the user's computer.
- SOPHI currently provides the following functionality:
  - Create new clients with demographic data
  - Update client information
  - Search for clients using search capability
  - Refer clients among agencies
  - Allow for messaging and free text comments
  - Download client and referral information to specified agency programs
- SOPHI provides a bi-directional interface between disparate legacy systems using a common interface file. In the current configuration, the interface is installed between SOPHI and the WIC and PHDS systems.
- The application resides on two servers: a web server and a server containing the Oracle database.
- SOPHI's database acts as a warehouse for client information including demographic data; some data is time-sensitive and is automatically removed at specified expiration dates and all data is confidential.
- The application can be used as a graphical interface that allows complete human intervention to transfer data or can be configured with features that create automatic transactions.

Applicability

- SOPHI could be used as a model for a "Sharing of MANS Information" system for the creation, update, and exchange of MANS-related data.
- This new system could provide a mechanism for the transfer of MANS data among various agencies with different and disparate records management systems.
- The current referral functionality could be expanded to make the referrals automatic to move data from agency to agency through the arrest cycle.
- The indexing or warehousing functions could be used to search on pre-existing MANS data to verify existence of MANS number.
- The new system could take advantage of existing infrastructure and programs (such as CHRS) in MTDOJ.
- The system can be interfaced with existing systems or can act as a stand-alone function to provide for the storage and transfer of MANS-related data.

Cost Estimate

- SOPHI was part of a data integration project that included the development of a public health data system. This larger project, known as IDEA (Integrated Data for Evaluation and Assessment), incorporated an extensive needs analysis and requirements definition. The cost for the development of SOPHI, exclusive of the associated planning efforts, was $221,000.

Wisconsin's Prosecutor System and Integration Efforts

The following information provides a quick summary of recent integration efforts in the State of Wisconsin:

- Wisconsin's PROTECT system, a case management system for district attorneys, was built in-house using Byrne funding. It uses SQL server and its current configuration is not web based. It was built to interface with other state and local systems.

- According to the Wisconsin's Bureau of Justice Information Systems (BJIS) web page, the agency "implemented local area networks (LANs) with standard configurations and a standard suite of software, with the intent of creating a 'DA Net.' The goals of the DA Net program are:
    - Allow DAs to integrate with their entire office staff
    - Allow each DA Office attorney and staff member to communicate with his/her counterparts across the state as well as with allied agencies such as DOJ or DOA
    - Allow centralized document and application integration
    - Provide a standard infrastructure for the District Attorney Case Management System (DA/CMS)
    - Provide TIME (DOJ criminal history) access to each required desktop
    - Provide local county resources to each required desktop
    - Provide CCAP (court automation) data to each required desktop
    - Provide for centralized remote LAN support
    - Provide access to legal research tools
    - Provide email for all participating DAs and connectivity to the Internet."

- Wisconsin is also embarking on a pilot project to create a model WIJIS (Wisconsin Justice Information Sharing) county by linking the PROTECT system to law enforcement and courts. The objective is to allow the exchange of reports among the agencies in an electronic format, including the transfer of disposition information to the state's central repository, and to have this exchange occur automatically (presumably by pre-established business rules). This pilot will use a single point of data entry and two-way exchange of information on offenders and cases.
    - ° Factors considered in selecting the pilot counties include successful use of PROTECT, compatible systems across agencies, good working relationships. One of the counties selected has all law enforcement agencies using the same RMS.
    - ° An interface with the state's courts automation program will be piloted in another county.

- A web-based solution for access of information by authorized criminal justice agencies is also underway; called eTIME. This solution will use XML.

- The Wisconsin PROTECT system has been implemented by some of the prosecutors in Massachusetts through a system transfer; an interface has been developed for law enforcement agencies and the system will eventually be linked with courts as well. The software runs on a Windows NT platform and was developed using Microsoft's Visual Basic software tools.

Sources: GovTech.com; Bonnie Locke, WI Bureau of Justice Information Systems; OJP Information Technology Initiatives

6 APPENDIX C: MANS SHEET HIGH-LEVEL PROCESS FLOW

MANS Sheet High-Level Process Flow